CURRICULUM VITAE

Morteza Abkar, Ph.D, Assistant Professor
July 2022

Personal details

Name: Morteza Abkar

Born: 7th July 1983, Kashan, Iran

Nationality: Iranian

Family status: Married

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Education

Ph.D. Molecular Genetics, 2010- 2015. University of Tarbiat Modares

Thesis Title: Design and Production of Chimeric Protein Containing Omp19, Omp31 and Urease against *Brucella* and Evaluation of its Immunogenicity.

MSC: Cellular and Molecular Biology. 2007-2010. Common Student Shahid Madani University of Azarbaijan & National Institute of Genetic Engineering

Thesis Title: Functional Analysis of Mutated Ribosomal Protein L3 (RPL3 W258C/H259Y) in Yeast towards Conferring Resistance to Mycotoxin Deoxynivalenol.

BSC: Cellular and Molecular Biology Genetics. 2002-2006 University of Esfahan

Professional Experience

Assistant Professor in Genetics Department. 2020 up to now. Shahid Ashrafi Esfahani University

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Postdoc researcher

Shiraz University of medical sciences (June 2017- June 2018)

Thesis Title: Production of chitosan based nanovaccine containing *Brucella melitensis* Omp31 and investigation of its immunogenicity in mouse model.

Research Interests:

Detection of Different Pathogens by Molecular Methods.

Production of Recombinant Proteins in Different Host Cells.

Vaccine Design by Bioinformatics Tools.

Function Evaluation of Different Vaccine Delivery Systems.

Publications:

1. **Morteza Abkar**, Abbas Sahebghadam Lotfi, Jafar Amani, Seyed Ali Ghorashi, Gholamreza Nikbakht Brujeni, Mehdi Kamali. Design of a chimeric DNA Vaccine against Brucella spp. Minerva Biotecnologica 2014; 26:223-233.

2. **Morteza Abkar**, Jafar Amani, Abbas Sahebghadam Lotfi, Gholamreza Nikbakht Brujeni, Saeed Alamian, Mehdi Kamali. Subcutaneous immunization with a novel immunogenic candidate (urease) confers protection against Brucella abortus and Brucella melitensis infections. APMIS 2015 Aug; 123(8): 667-675.

3. **Morteza Abkar**, Abbas Sahebghadam Lotfi, Jafar Amani, Khadijeh Eskandari, Mehdi Fasihi Ramandi, Jafar Salimian, Gholamreza Nikbakht Brujeni, Saeed Alamian, Mehdi Kamali, Hamid Koushki. Survey of Omp19 immunogenicity against Brucella abortus and Brucella melitensis: Influence of nanoparticulation and route of administration versus traditional immunization. Vet Res Comm. 2015 Dec; 39(4):217-28.

4. Ahmad Poursadegh Zonouzi, Saeid Ghorbian, **Morteza Abkar**, Ali Akbar Poursadegh Zonouzi, Ali Azadi. 2014. Mitochondrial Complex I Gene Variations; as a Potential Genetic Risk Factor in Pathogenesis of Multiple Sclerosis. J Neurol Sci 345. 2014. 220-223.

5. Saeid Ghorbian, **Morteza Abkar**, Ahmad Poursadegh Zonouzi. 2014. Methodology to Understand How Perforin Assembles on Membranes. Scandinavian journal of immunology. 80. 2014. 73-74.

6. **Morteza Abkar**, F. Sanjarian and M. Mousavi. 2013. Asses ability of mutant variety of ribosomal protein L3 (RPL3 W258C/H259Y) in resistance to mycotoxin of Fusarium graminearum by using Saccharomyces cervisiae. Crop Biotech. Persian. 13-23.

7. Bandani E, Soflaei S, Khalili F, Aghei Afshar M. A, Kooshki H, Abdoli A, Kamali M, Sarvi S, Nasiri V, Jafari A. A, **Abkar M**. Recombinant plasmid KMP-11 gene Leishmania major (pcKMP-11): production, characterization and sequencing. Minerva Biotecnologica 2014; September; 26 (3):175-182.

8. Ali Akbar Poursadegh Zonouzi, Ahmad Poursadegh Zonouzi, **Morteza Abkar**. Recent Applications of DNA Vaccines in Cancer Therapy. Molecular medicine journal. 2016. Vol 1, Num 3.

9. **Morteza Abkar**, Abbas Sahebghadam Lotfi, Jafar Amani, Mehdi Fasihi Ramandi. Optimization of a method for refolding of bacterial recombinant proteins. Molecular and biochemical diagnosis journal. Vol.2, No.1 (2016), 65-78.

10. Salman Bagheri, Maryam Yasemi, Elmira Safaie-Qamsari, Jamal Rashidiani, **Morteza Abkar**, Mahmoud Hassani, Seyed Ali Mirhosseini and Hamid Kooshki. Using gold nanoparticles in diagnosis and treatment of melanoma cancer. Artificial Cells, Nanomedicine, and Biotechnology, 2018.

11. **Morteza Abkar**, Mahdi Fasihi Ramandi, Hamid Kooshki, Abbas Sahebghadam Lotfi. Oral immunization of mice with Omp31 loaded N-trimethyl Chitosan nanoparticles induces high protection against B. melitensis infection. International journal of nanomedicine. 2017:12 8769–8778.

12. **Morteza Abkar**, Mahdi Fasihi Ramandi, Hamid Kooshki, Abbas Sahebghadam Lotfi. Intraperitoneal immunization with Urease loaded N-trimethyl Chitosan nanoparticles elicits high protection against B. melitensis and B. abortus infections. Immunology Letters. 199 (2018) 53–60.

13. Reza Heidari, Jamal Rashidiani, **Morteza Abkar** et al. CdS nanocrystals/graphene oxide-AuNPs based electrochemiluminescence immunosensor in sensitive quantification of a cancer biomarker: p53. Biosensors and Bioelectronics. Volume 126, 1 February 2019, Pages 7-14.

14. Roksana Sookhaklari, Bita Geramizadeh, **Morteza Abkar**, Maryam Moosavi. The neuroprotective effect of BSA-based nanocurcumin against 6-OHDA-induced cell death in SH-SY5Y cells. Avicenna Journal of Phytomedicine. 2018. In press.

15. Maryam Moosavi, Roksana SoukhakLari, Leila Moezi, Fatema Pirsalami, **Morteza Abkar**. Curcumin Loaded BSA Nanoparticles Protects More Efficiently Than Natural Curcumin Against Scopolamine-Induced Memory Retrieval Deficit. Basic and Clinical Neuroscience. 2018.

16. **Morteza Abkar**, Saeed Alamian and Naghmeh Sattarahmady. A comparison between adjuvant and delivering functions of calcium phosphate, aluminum hydroxide and chitosan nanoparticles, using a model protein of brucella melitensis Omp31. Immunology Letters. Volume 207, May 2019, Pages 28-35.

17. Mahshid Samie Ghahfarokhi, Somayeh Reiisi, Zahra Zamanzadeh, **Morteza Abkar**. Association of hsa-miR5571-5p expression with clinicopathological factors and identification of its hub target genes and key pathway in breast cancer. Iranian Journal of Public Health. 2022. Under print.

Conference Presentations

Talks:

1. **Abkar M**, Sahebghadam Lotfi A, Amani J, Eskandari K, Fasihi M, Nikbakht Brujeni G, Alamian S, Kamali M. Brucella abortus Outer Membrane Protein 19 Loaded N-trimethyl Chitosan Confers Protection against B. abortus, B. melitensis and B. suis in Mice. 12 th international congress of immunology & allergy. **Lecture**. 2014. Tehran. Iran.

2. **Abkar M**, SahebghadamLotfi A, Amani J, Eskandari K, Fasihi M, Nikbakht Brujeni G, Kamali M, Koushki H. The Oral Chimeric Vaccine Candidate Omp19-Omp31 Induces Protection against Different Brucella spp Challenges by Inducing IL-17 Immune Response. 12 th international congress of immunology & allergy. **Lecture**. 2014. Tehran. Iran.

3. **Abkar M**, Poursadegh Zonouzi A, Fasihi Ramandi M, Sahebghadam Lotfi A. Influence of Administration Route on Omp31 immunogenicity against Brucella melitensis. 13 th international congress of immunology & allergy. **Lecture**. 2016. Tabriz. Iran.

4. **Abkar M**, Nikbakht Brujeni G, Poursadegh Zonouzi A, Fasihi Ramandi M, Sahebghadam Lotfi A. Examination of Urease immunogenicity against Brucella abortus and Brucella melitensis: influence of nanoparticulation versus traditional immunization. 13 th international congress of immunology & allergy. **Lecture**. 2016. Tabriz. Iran.

5. **Abkar M**, Alamian S and Sattarahmady N. Gelatin nanoparticle based delivery of Urease and Omp31 in mice protects against Brucella melitensis 16M infection. 14 th international congress of immunology & allergy. **Lecture**. 2018. Tehran. Iran.

6. **Abkar M**, Alamian S and Sattarahmady N. Subcutaneous vaccination with aluminium hydroxide/Omp31 and chitosan/Omp31 nanoparticles induces protection against Brucella melitensis infection in BALB/c mice. 14 th international congress of immunology & allergy. **Lecture**. 2018. Tehran. Iran.

7. **Abkar M**, Alamian S, Fasihi Ramandi M and Sahebghadam Lotfi A. Oral Administration of Mice with Chimeric Protein Containing Urease, Omp31 and Omp19 Induces High Protection against Brucella melitensis and Brucella abortus Infections. 14 th international congress of immunology & allergy. **Lecture**. 2018. Tehran. Iran.

Posters:

1. **Abkar M** and Sanjarian F. In silico analysis of yeast acetyl transferase (AYT1). The 4 th Iranian conference on Bioinformatics. Poster. 2012. Tehran.

2. **Abkar M**, Sahebghadam Lotfi A and Amani J. Cloning, expression, purification and in silico analysis of the Brucella Urease. 3 rd international student biotechnology congress. Poster. 2013. Tehran. Iran.

3. Taghipour Kamalabad S, Zamanzadeh Z, Rezaei H, Tabatabaeian M, **Abkar M**. Association between DROSHA rs642321 Polymorphism and Breast Cancer in Iranian Women. International conference on human genetics and genomics. Poster. Yazd. December 2021.

4. Taghipour Kamalabad S, Zamanzadeh Z, Rezaei H, Tabatabaeian M, **Abkar M**. rs10719T>C polymorphism in DROSHA gene may destroy binding site of has-miR-664a-3p and has-miR-1298-5p. International conference on human genetics and genomics. Poster. Yazd. December 2021.

5. Owji F, Jamali S, **Akbar M**. In silico polyepitope vaccine design against SARS-COV-2 infection. International conference on human genetics and genomics. Poster. Yazd. December 2021.

6. Jamali S, Owji F, **Abkar M**. Design of a Common Vaccine against Influenza and SARS-COV-2 Viruses by Using In Silico Tools. International conference on human genetics and genomics. Poster. Yazd. December 2021.

7. Shelerangkon M, Khodabakhsh M, Moein B, Nasri E, **Abkar M**, Fakhim H. Co-infection of Gardnella vaginalis and human papillomavirus in cervical samples: A multicenter study in Iran. Iran 22nd international virtual congress of microbiology. Poster. Tehran. September 2021.

8. Khodabakhsh M, Shelerangkon M, Moein B, Nasri E, **Abkar M**, Fakhim H. Molecular characterization of airway yeast colonization in tracheal aspirates of patients with SARS-CoV2 infection admitted to the intensive care unit in Isfahan, Iran. Poster. Tehran. September 2021.

Patents:

Iran Patent Center, Patent No: 87917

Iran Patent Center, Patent No: 99547

Teaching Experience:

University Courses: Basic Genetics, Molecular Genetics, Immunology, Topics in Genetics, Genetic Engineering.

Teaching Workshops; Bioinformatics, Genome and Protein Database Introducing and Primer Design, Real-time PCR, Gene Cloning and Bacterial Transformation, PCR and Gel Electrophoresis, RNA Isolation, RT-PCR, Principles of DNA Isolation from plants, Animals and Prokaryotic Cells, Vaccine Design.

Skills:

Design of blood DNA extraction kit

Primer design

PCR Types such as RT-PCR, Real-time PCR, Soeing PCR, PCR-RFLP, …

Gene cloning, SDS-PAGE & Western Blotting

Design and Production of DNA extraction kits from blood, saliva, …

Vaccine design

ELISA

MTT assay

Reference

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